

2020 SETO PEER REVIEW

Relevant topics to current portfolio:
Collectors (25%)
High Temperature Thermal Transport (75%)

Single Year R&D Programs

SIPS & 1 Year Lab Call

Initiatives to date

Solicitation	Projects Selected	Nominal Start	Nominal Duration	Median Award Size
FY18 SIPS	9	Feb. 2019	18	\$400,000
FY20 Labcall	9	Oct. 2019	12	\$400,000
FY20 SIPS	TBD	Jan 2021	12+	\$300,000+
FY21 Labcall	TBD	Oct. 2020	12	\$400,000

Why do this?

Traditionally SETO has funded component R&D

Requires substantial investment to arrive at relevant capstone testing

Agile response to single high risks

- Focused low TRL effort may determine if a concept deserves substantial funding
- Single innovation may be needed to fill a gap on a known technology

Provides a consistent funding mechanism

Researchers can anticipate funding opportunities and plan accordingly

Open to ideas outside what we anticipate

- Other FOA topics can be highly specific
- Forces SETO to evaluate outside the box concepts

Other Features

Simplified Application Process

- No concept paper, Reduced application length
- No in-person merit review

Modified Management Practices

- Reduced reporting requirements
- More amenable to time over-runs

Downsides

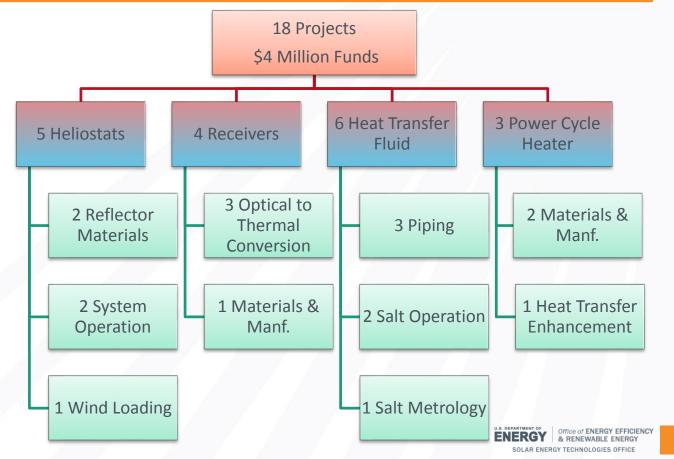
- Heavier Administrative Burden per Dollar Spent
- Challenging to manage staff hiring for such short project periods

Overview of selected projects

12 Materials, Manufacturing

5 "Follow on projects"

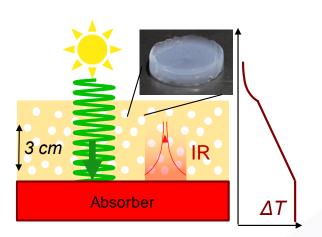
New Relationships with PNNL, LLNL, University of Michigan, University of Utah

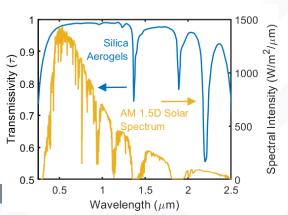


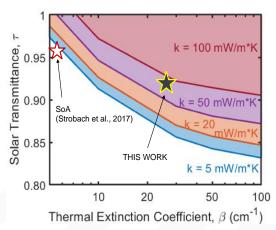
Sample project:

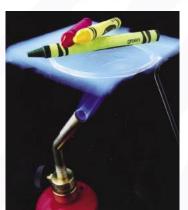
Robust and Spectrally-Selective Aerogels for Solar Receivers

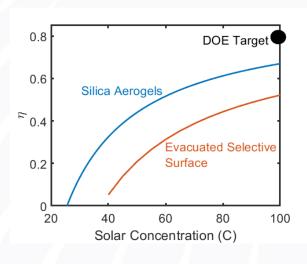
PI: ANDREJ LENERT / UNIVERSITY OF MICHIGAN











Trough Receivers at Gen3 CSP temperatures without vacuum tubes.

A Paradigm Shift!



2020 SETO PEER REVIEW

Relevant topics to current portfolio:
Collectors (25%)
High Temperature Thermal Transport (75%)

Single Year R&D Programs

SIPS & 1 Year Lab Call